BRULE RIVER STATE FOREST MASTER PLAN
FACT SHEET

Forestry

History

The history of forest management on the Brule River State Forest (BRSF) begins prior to the late 1800's when disturbances were caused by natural forces of weather and fire, with little human caused disturbance. The exception to this was the use of fire by Native Americans to manage wildlife habitat and blueberry crops in the "barrens" area of the BRSF. Early surveyors records indicate a diverse natural forest cover of many forest species including pine barrens, pine forest, hardwood, bog conifers, aspen, and spruce/fir. Around 1890, the logging of the great stands of pine began in the Brule River area. Dams were built on the Brule River to raise water levels to a point where the logs could be floated to Lake Superior. By 1909, the great majority of the marketable timber in the Brule area was logged. A few exceptions were areas of the upper river valley where older pine stands on privately held lands and the cedar bog received limited harvest.

Following this massive unregulated cutting, wildfires raged throughout the area. The large amount of logging slash, the presence of steam railroads, clearing for agricultural purposes, and the increased presence of people in this area, fueled large wildfires that touched just about every acre of what is now the BRSF during the period of 1890-1935. These fires, along with attempts at agriculture, set the stage for what forest conditions would be through the present time.

Present Forest Cover

Once fire suppression efforts were undertaken beginning in the 1920's, the land began to recover from the early logging and massive fires that swept through following the logging. **Aspen** and **birch** are species that became established on the open lands created by the logging, burning, and agricultural efforts. These species were always prevalent on most of the BRSF, but the conditions were very conducive to the establishment of new stands of aspen and birch with the conditions that were created in the early 1900's. Today, the BRSF has around **14,000 acres** of aspen, along with about **1,400 acres** of birch.

Upon the creation of the BRSF, early forestry efforts were concentrated on the planting of red pine and jack pine on open and burned over lands. Much of the initial labor force in this effort came from the Civilian Conservation Corps which had a camp located in Brule. This planting continued into the 1970's, which resulted in over 6,000 acres of pine plantations. Most of the pine plantations are located on the southern and eastern portions of the forest, on sandy soils. These pine plantations, along with natural pine stands, result in total **pine** acreage of about **10,000 acres** today.

Located on dry sandy sites, mostly on the southeast corner of the BRSF, are large areas of scrub oak. Scrub oak is a component of the pine barrens which is characterized by scattered jack and red pine, with scrub oak and brushy lands mixed between the trees. This vegetative community was maintained by a combination of lightning and man set fires which were fueled by the brush and young pine trees growing under extremely dry conditions. This covertype is a natural community of special concern due to the statewide scarcity of this ecosystem. **Scrub oak/pine barrens** covertype totals about **2,300 acres** on the BRSF.

The balsam fir and spruce forests that historically were a major component of the northern part of the forest on the clay soils near Lake Superior, are now a smaller, yet still abundant component of the BRSF. Today, the majority of these tree species are found associated with other forest cover types such as aspen and bottomland hardwoods. Over time, the fir/spruce covertype is increasing in acreage through management activities which promote or allow this covertype to increase in acreage. The present acreage of **fir/spruce** covertype is around **2,200 acres**.

Another notable forest type is **swamp conifers** which include white cedar, tamarack, and black spruce. These trees are mostly located in the "Brule Bog" which borders the upper stretches of the Bois Brule River. For the most part, this area has been untouched by man's influence. About **1,500 acres** is covered by these swamp conifer species.

Hardwood species such as oak, sugar maple, and basswood occupy another **1,000 acres** of the BRSF, mostly located on the area known as the Copper Range on the northern half of the BRSF which has loamy soil types. Located in low areas are bottomland hardwood and swamp hardwood cover types. Trees located in these wet areas include black ash and green ash, usually mixed with aspen, tamarack, and other associated species. These **swamp hardwood** areas occupy another **1,100 acres** of the BRSF.

Management Activities

The BRSF carries on an active, sustainable forest management program based upon the ecological potential of the site. The soils, moisture, and vegetation are studied to determine what type of forest will best utilize the site. This local site information, combined with landscape level information and biodiversity concerns, form the basis for long term planning of land management activities on the BRSF. Special emphasis is placed upon improving aesthetic conditions, controlling erosion, and providing for natural regeneration in forest management activities.

Forest management activities are implemented primarily through timber sales which vary from the thinning of pine stands to regeneration harvests of aspen and jack pine. The annual growth rate of trees on the BRSF has been about double of the rate of removal. This, coupled with an increase in acreage through land acquisition, has increased the growing stock of trees over time. Since 1983, an average of 118 acres has been thinned each year, along with an average harvest of 322 acres per year. This has resulted in an average harvest of over 8,000 cords of wood per year. Other forest management activities include site preparation for planting and natural seeding, tree planting, pruning activities, and timber stand improvement.